

A Newsletter
About Prevention,
Preparedness,
and Response

Spill SCENE



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Spill Prevention, Preparedness, and Response Program

2001 Annual Report

Letter from the Program Manager

Hello Everyone,

I came to the Spills Program in August 2001, already impressed by the high level of expertise, experience and dedication shown by staff in the program. I am fortunate to have such an experienced workforce as we move into the changing world of the early 21st Century. Our work has become more complex. We continue to invest in increasing our technical sophistication and building on the structure established in the last decade.

We also continue to build our partnerships with those who have a stake in the work of the program and who share the goals of protecting the environment and public health from the hazards posed by spills. These relationships depend on good communication, ensuring accountability, and being clear on our expectations.

State government is changing as it deals with the budget constraints of an economic downturn and citizen initiatives. We are in an era of strong emphasis on government efficiency, responsiveness and accountability. In the coming year we will be paying close attention to regulatory reform opportunities and our effect on economic competitiveness. This, however, will not change our mission. The Spills Program remains dedicated to preventing spills, being prepared, and responding to them effectively.

The year 2001 has been one where program employees brought new insights to their work. They did this while maintaining, even exceeding, the quantity and quality of work done in past years.

Spill preparedness staff increased our emphasis on learning from spill drills. Those lessons helped improve equipment distribution to deal with possible spills, enhanced our communication among ourselves and with our stakeholders, and clarified and enhanced roles and responsibilities. There are still gaps in environmental protection, but we are working collaboratively to fill those gaps. Also, the 2001 Legislature approved the funding for a pipeline specialist, as a result of recommendations from the Governor's Fuel Accident Prevention and Response Team.

Spill prevention staff increased their vessel inspection rate by 20 percent. The dedicated rescue tug stationed at Neah Bay assisted

Program Overview

Each year more than 16 billion gallons of oil product moves through the State of Washington, in tankers, barges, pipelines, railcars and trucks. Billions more pass through as fuel in gas and diesel tanks. Ships, trucks and railroads move millions of tons of hazardous substances, from chlorine to metal ores, around the state. Any of these materials have the potential to harm people and the environment if spilled.

The Spill Prevention, Preparedness, and Response Program at the Washington Department of Ecology works to protect Washington's environment and public health and safety from the hazards created by spills of oil and other hazardous substances. The Program focuses on preventing oil spills to Washington waters and land, on effective response to oil and hazardous substance spills wherever they occur, and on restoring natural resources damaged by spills.

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The Program is composed of 63 staff – spill responders, vessel inspectors, environmental planners, engineers, and other management and support staff. An additional 22 staff from other Ecology offices serve as part-time, after-hours spill responders. The Spills Program maintains vessel inspection field offices near the Seattle and Portland ports, regional response offices in Bellevue, Lacey, Yakima, Spokane, and the Vancouver field office, and a headquarters' office in the Ecology building in Lacey.

Ecology staff have responded to spills since the Department's creation in 1970, but the agency did not institute a full-time, dedicated spill response staff until the early 1990s. In 1991, the Washington State Legislature considered the damage caused by the 1988 *Nestucca* oil barge spill in Grays Harbor County and the 1989 *Exxon Valdez* oil spill in Alaska and passed the Oil Spill Prevention and Response Act.

The Act set the funding mechanism and mandate for the state's spill program. It increased state involvement in oil spill prevention, preparedness, and response activities. It split oil spill prevention and preparedness activities between the state Office of Marine Safety (OMS), overseeing vessel activities, and the Department of Ecology, overseeing activities at oil handling facilities (refineries, pipelines, etc.). In 1997, OMS merged with Ecology's spill prevention and response office to create the current Spills Program.

eight vessels with various problems, including a drifting, decommissioned oil tanker that had broken free from its tug. The State of Washington signed a significant memorandum of agreement with the federal government for the Department of Ecology and the U.S. Coast Guard to use in working together. Since September 11, we have assumed more responsibility for coastal environmental protection as the Coast Guard increases its focus on port security.

Spill response staff began a new phase of state/federal cooperative work on small spills from vessels. The Spills Program now responds on behalf of both federal and state governments to many small spills. We increased our drug lab response force to help protect the environment from the steady rise in this source of chemical wastes (25 percent increase in labs and dumps since 2000). And the continuing focus on efficiency in dealing with this workload brought a Governor's award to the drug lab team.

The program made significant advances in our data tracking system, which supports all aspects of the Spills Program. The New Environmental Report Tracking System, the result of more than a year's work, provides a sophisticated tool to capture, record, and analyze information from the first report of a spill to the final sign-off by an investigator. It increases the reliability of the data by making it easier to input the information correctly and offers more in the way of useful reports.

Washington's decade-long focus on spills and the corresponding investment has paid off. Since the inception of the state spills programs in 1991, the number of oil spills over 10,000 gallons has dropped dramatically. There were 14 of these major spills in the seven years between 1985 and 1992; in the nine years since then there have been only four such spills. We have achieved this through considerable effort by industry, federal agencies, and the Department of Ecology under the watchful eyes of the public and local and tribal governments. Our work together makes a difference, to both the state's environmental health and its economic well-being. I look forward to our continued success in achieving our spill prevention and response goals together.

Dale Jensen
Program Manager

Spill Prevention Activities

The Department of Ecology's primary mission is prevention – keeping pollutants out of the environment. The Spills Program help prevent spills from vessels by examining information on ships coming into Washington waters, physically inspecting the ships that seem most likely to cause problems, and tracking and analyzing any spills or other incidents that could have led to spills to learn from the experience. The Program also helps to prevent spills from regulated oil-handling facilities by ensuring they have and implement up-to-date procedures to deal with incidents that could lead to spills, and by tracking and analyzing spills that do occur.

Table 1. Vessel Totals and Performance Indicators.

Summary Totals	1998	1999	2000	2001
Vessel Entering Transits to Washington Waters ¹	5178	5601	5652	5208
Cargo Vessel Screenings	2629	2651	2659	2462
Screened Vessels of High/Very High Risk	1391	1586	1601	1533
Incidents Reported ²	94	107	131	152
Inspections	759	919	904	1090
Citations Issued	141	155	112	52
Performance Indicators				
Incident Rate (% of vessel transits) ³	1.50%	1.72%	2.00%	2.40%
% Vessels Screening High/Very High Risk	52.9%	59.8%	60.2%	62.2%
Enforcement Actions (% of vessels inspected)	18.6%	16.9%	12.4%	4.8%
¹ Commercial cargo, passenger, and fishing vessels, 300 gross tons and larger, and all oil tankers. Does not include tank barges, ferries, or Canada-bound vessels. ² Spills and marine casualties (collision, loss of power, serious violation, etc.) for all vessels. ³ These rates are adjusted to exclude ferries.				

Vessel Inspections

In 2001, vessel inspectors increased the inspection rate by 20 percent over last year. The number of entering vessel transits, the number of these vessels screened, and the screening results all declined slightly. (See Table 1. Vessel Totals and Performance Indicators.)

The rate of reported oil spills from vessels over the last year showed a clear downward trend. The overall vessel incident rate continued a three-year upward trend, however, due entirely to an increase in the vessel casualty rate. (See Figure 1. Three-Year Vessel Incident Rate.)

The major contributor to the decreased spill rate has been a decrease in the number of spills by fishing vessels since mid-2000. The major contributors to the increase in vessel casualties are cargo

Prevention Overview

Vessel Screening – Cargo and passenger vessels entering Washington waters are screened for potential environmental risks.

Vessel Inspections – Inspectors board commercial ships and work with officers and crew to evaluate the risk of harm they pose to the public and environment.

Bunker Monitoring (Refueling) – Inspectors check bunkering procedures and equipment to reduce the frequency of spills during fuel transfers.

Investigations – Investigating vessel and oil-handling facility incidents (accidents, spills, near-spills, and near-miss incidents) helps to determine what prevention lessons can be learned, assists in assessing resource damage for cost recovery, and supports enforcement actions when necessary.

Oil-handling Facilities – Facilities must develop spill prevention plans and submit them to Ecology for review, to help ensure that facilities operate in a safe and pollution-free manner.

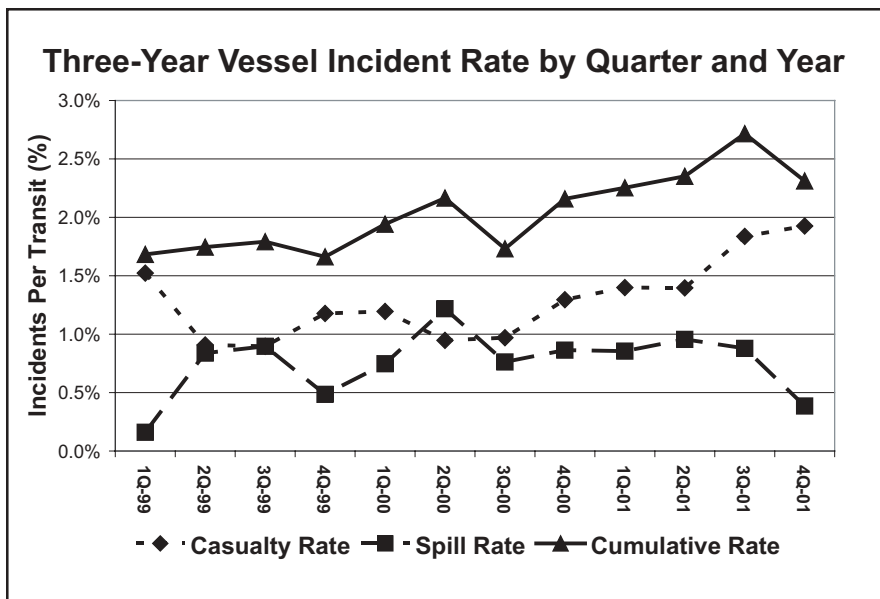


Figure 1. Three-Year Vessel Incident Rate by Quarter and Year

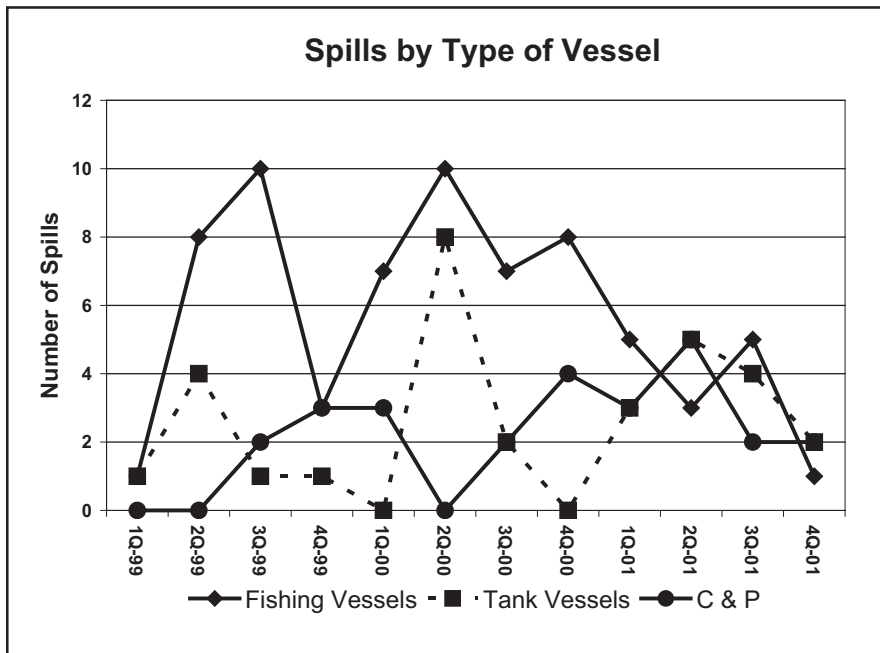


Figure 2. Spills by Type of Vessel.

and passenger and tank vessels. (See Figure 2. *Spills by Type of Vessel.* and Figure 3. *Casualties by Type of Vessel.*)

The Spills Program assesses performance measures to help focus its regulatory efforts on the areas most in need of increased attention, and to determine which efforts have been successful. An example of this is our bunker (refueling) monitoring inspection activities. Vessels that have undergone a bunker monitoring inspection continue to show a significantly decreased rate of spills from bunkering operations, as compared to the “All vessel rate.” They have had no spills within 60 days following the inspection. The rate of spills continues to show a substantial reduction up to 180 days following the inspection. This reflects the success of our vessel inspection activities in educating vessel operators on procedures to follow to prevent bunkering spills. (See Figure 4. *Rate of Spills from Bunkering.*)

Recognizing this influence on the spill rate, Spills Program inspectors increased the number of bunker monitor inspections to 55 percent of all compliance inspections. (In 1999, 38 percent of the compliance inspections were bunker monitor inspections; in 2000 the rate was 41 percent.)

Incident Analysis

Spills and other incidents provide an opportunity to learn from mistakes and system shortcomings. Investigators analyze the mishaps to determine lessons to share with the wider marine industry, encouraging systematic improvements in marine safety. Investigations also provide detailed and verified information so that Ecology can make informed decisions regarding marine safety and spill prevention. (See Figure 5. *Principal Incident Cause by Year.*)

The information developed from these analyses is widely disseminated. It is posted on Ecology’s Web site, published as case studies in *Prevention Bulletins*, compiled and disseminated for

specific safety concerns in *Safety Advisory Bulletins*, and sent to ship operators as prevention recommendations specific to their operations. The analyses are also used to target Spills Program staff time and resources. Finally, incident analyses are shared with the U.S. Coast Guard and other appropriate agencies so that they can incorporate the information into their decision-making processes.

Incidents that are simply documented, with limited substantial analysis, are used to develop maps that indicate where marine safety ‘hot-spots’ exist in Washington waters. The sources of these reports are ship masters, agents, operators, and other government agencies.

Incident investigations can generate national interest as well. *Professional Mariner*, a respected monthly maritime journal, invited Ecology staff to their 2002 marine casualty conference to present the case study of a tanker oil spill investigation completed in 2001.

During 2001, Spills Program staff continued to make good use of the international reach of the World Wide Web. They created and posted four “Pictures of the Month” and three “Events of the Month” to highlight marine safety incidents. These can be used to initiate discussions at shipboard safety meetings or to highlight good maritime practices. They also provide the people of Washington a window on marine safety concerns within state waters.

Staff also gathered, analyzed and posted to the Web information for the drift incident involving the decommissioned tanker *Atigun Pass*, its towing vessel *De Da*, and the dispatch of the Neah Bay rescue tug, *Barbara Foss*. (See *North Puget Sound Protection*)

Spills Program staff developed and published two prevention bulletins in 2001. One presented information on the tanker *Arco Texas*. In 1999, the tanker pulled away from a dock in Ferndale,

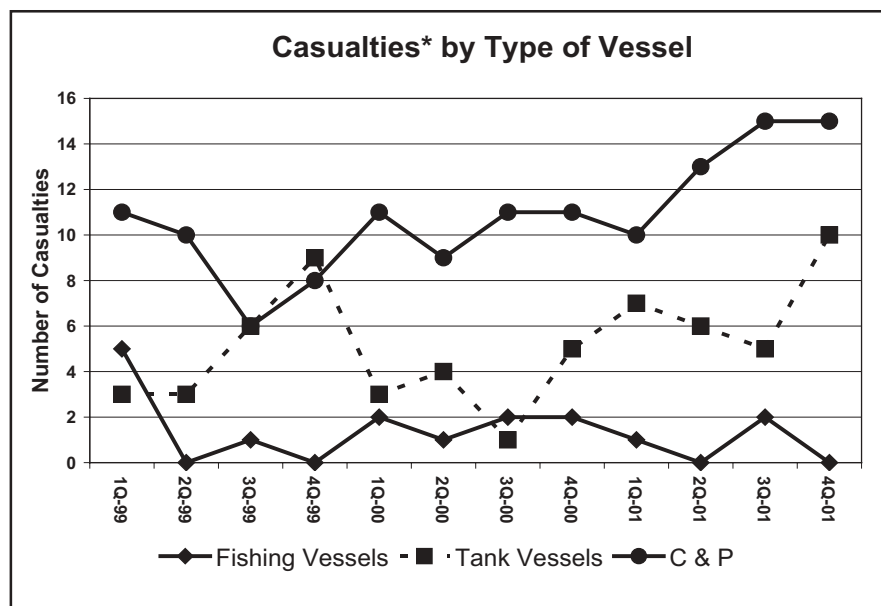


Figure 3. Casualties by Type of Vessel.

**Casualties refer to collision, loss of power, serious violations, etc.*

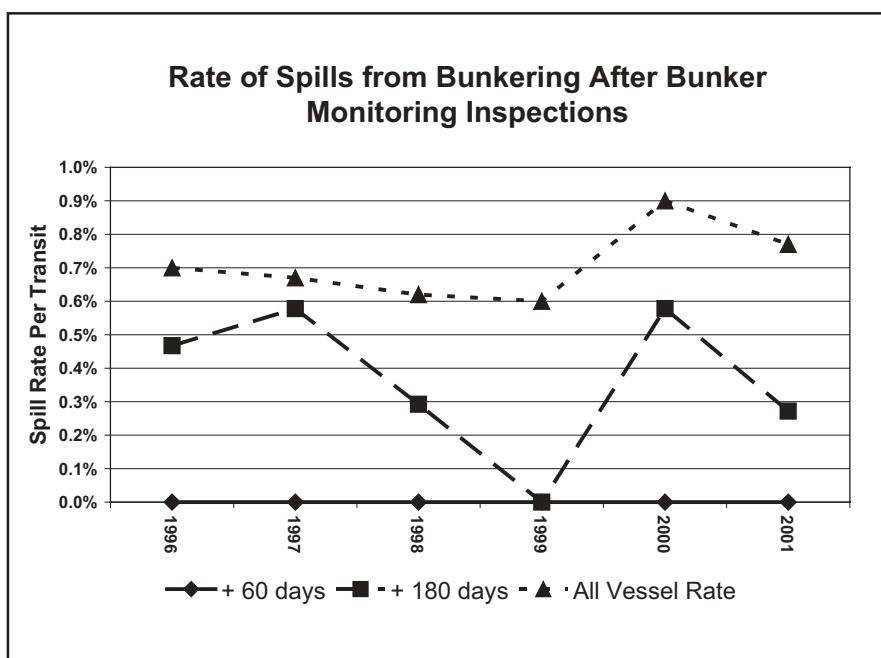


Figure 4. Rate of Spills from Bunkering after Bunker Monitoring Inspections.

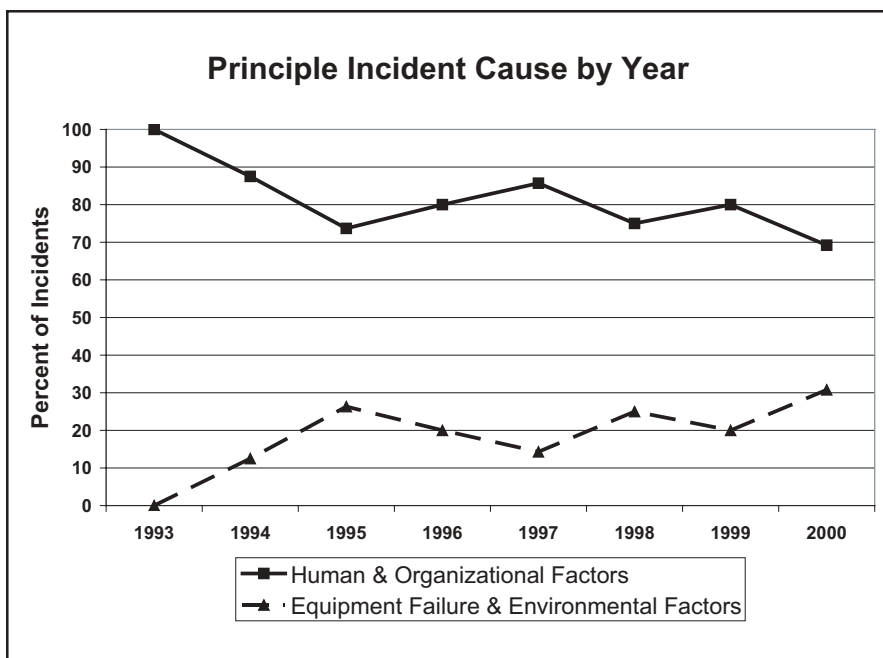


Figure 5. Principle Incident Cause by Year.

Washington while unloading crude oil. This resulted in a 300-gallon spill, and damaged the oil handling facility and the ship. The prevention bulletin dealt with the importance of maintaining mooring equipment and the need to treat mooring equipment as a safety-critical system. Another prevention bulletin involved the cargo ship *Super Rubin*. In 1999, the *Super Rubin* spilled oil when fueling from a barge while anchored in the Columbia River. The bulletin emphasized the need to ensure crews are well-rested before fueling operations are undertaken.

Vessel Spill Prevention Planning

Thirty-six tank ship and tank barge companies from 14 foreign countries and the U.S. participated in the Voluntary Best Achievable Protection Program during 2001. The companies voluntarily submitted oil spill prevention plans. The plans authorize Spills Program vessel inspectors to make shipboard inspections to verify that the companies are meeting Washington's spill protection standards.

Spills Program plan reviewers have approved the plans of 27 companies. Ecology recognizes companies with approved plans and publicizes their names on the Washington Best Achievable Protection List at the Spills Program Web site. Two of the three companies operating tank ships in the Trans-Alaska Pipeline System trade are enrolled in the voluntary program. This represents approximately two-thirds of crude oil tanker entries into Washington waters during 2001.

The 36 companies are operating their tank vessels under oil spill prevention measures that exceed federal and international standards. One company, SeaRiver Maritime, Inc., has earned the prestigious Exceptional Compliance Program (ECOPRO) award for "excellence in tank vessel safety and environmental stewardship." Under ECOPRO, the company meets or exceeds operating and management standards even more stringent than the basic voluntary standards.

Facility Spill Prevention Planning

There are currently 35 oil-handling facilities in Washington under state oil spill prevention regulations. These include refineries, bulk storage terminals, pulp mills, pipelines, and facilities owned by federal and state agencies. In 2001, these regulated facilities were required to submit updated spill prevention plans to the Department

of Ecology for review and approval. Different facilities have different plan submittal schedules based on their size, operational complexity, and amount of oil transferred annually. Each facility is notified individually of its' plan submittal schedule. The four major oil refineries in Whatcom and Skagit counties were the first group to submit their spill prevention plans. The facility spill prevention staff are in the process of reviewing the submitted plans. Most of the facility spill prevention plans are expected to be submitted in 2002.

In 2001, the Department of Ecology removed three facilities from the regulated list since they had stopped using marine barge oil transfers. The facility spill prevention staff worked with the owners and operators of those three facilities to make sure they were properly closed to minimize the potential for any future environment impact. Staff also inspected facilities to ensure that oil transfer operations follow all applicable regulations. They have certified the oil-transfer training programs for all regulated facilities.

The most cost-effective way to prevent environmental damages caused by any spill is to keep the spill from occurring. We can keep the potential for facility spills to a minimum through a well-established spill prevention program, including regular equipment inspection and maintenance, adequate operating procedures and operator training programs, and monitoring equipment to alert the operator of any abnormal conditions. By establishing and enforcing Ecology's spill prevention requirements and working with the regulatory community, we can achieve our ultimate goal to protect the waters of the state.

North Puget Sound Protection

Approximately 10,000 ocean-going ships enter the Strait of Juan de Fuca each year bound for ports in Puget Sound and the Strait of Georgia. Together these vessels carry approximately 15 billion gallons of oil in cargo and as fuel. Any one of these ships has the potential to spill enormous quantities of oil. Tankers can carry over 30 million gallons, barges over 10 million gallons; and "dry cargo" ships up to two million gallons of oil. At the same time, the outer coast, Strait of Juan de Fuca, and northern Puget Sound are valuable marine habitats and especially vulnerable to oil pollution.

In 2001, the Department of Ecology continued to work on providing an additional measure of protection for this area.

The multi-stakeholder North Puget Sound Oil Spill Risk Management Panel completed its work in 2000 with a list of 24 separate recommendations to improve marine safety in the area. The Department of Ecology, the U.S. Coast Guard and the broader community made considerable progress on several of these recommendations during 2001, primarily through the Puget Sound Harbor Safety Committee.

On May 25, 2001 Washington Governor Gary Locke and Coast Guard Rear Admiral Erroll M. Brown, Commander 13th Coast Guard District, signed a memorandum of agreement on oil pollution prevention and response. The agreement culminated many years of

Want to Know More?

To learn more about the Spills Program, visit our Web site:

<http://www.ecy.wa.gov/programs/spills/spills.html>

To learn more about the Department of Ecology, visit the agency Web site:

<http://www.ecy.wa.gov/>

To view Spills Program publications on-line, or to order publications, visit the Department of Ecology's Publications Web page:

<http://www.ecy.wa.gov/biblio/spills.html>

close cooperation between the Coast Guard and Department of Ecology. It documents the strong partnership between the agencies and establishes a plan for developing an even closer day-to-day working relationship. The state and the Coast Guard have further agreed to develop the following protocols:

- ◆ Coordinating inspections of bulk oil transfer facilities.
- ◆ Sharing information related to marine transportation safety.
- ◆ Coordinating efforts on media relations during spill events.
- ◆ Developing a coordinated vessel inspection program.
- ◆ Monitoring oil transfers.
- ◆ Coordinating the review of facility oil spill contingency plans.
- ◆ Oil spill response drills.
- ◆ Sharing information on incident investigations.

While the Department and the Coast Guard have made some progress on the protocols, protocol development and implementation has slowed since the Coast Guard has had to reemphasize their port security mission following the events of September 11.



Photo by LT William Rimbach, USCG

The rescue tug Barbara Foss (right) assists the tug De Da in capturing the towline of the drifting decommissioned oil tanker, Atigun Pass.

In 2001, the dedicated rescue tug began its third winter season stationed at Neah Bay. During 2001, the tug assisted eight vessels. (For a total of 18 assists in its three seasons on-station.) The highlight of this year's deployment was the tug's participation in the rescue of the decommissioned oil tanker *Atigun Pass* during a major Pacific storm over Thanksgiving weekend. The tanker was being towed by the tug *De Da* from Portland, Oregon to China to be scrapped. The towline parted and the tanker drifted north, pushed by a major storm, until it was off the Washington coast. The Washington rescue tug, *Barbara*

Foss, was the first tug on-scene. Its maneuverability, specialized equipment, and highly trained crew played a critical role in the tanker's ultimate rescue.

Other incidents where the rescue tug was called into play included a chemical tanker carrying liquid caustic soda that had engine trouble in the Strait of Juan de Fuca, a tugboat towing a barge loaded with two million gallons of gasoline that had engine trouble off Cape Flattery, and a commercial fishing vessel crippled by contaminated fuel that needed standby assistance as it traveled to Port Angeles during a major storm.

Besides responding to emergency incidents, the *Barbara Foss* participated in a no-notice spill response equipment deployment drill with Polar Tankers, Inc. (See *Vessel and Facility Drills and Exercises*.)

The 2001 Legislature provided \$1.35 million for the dedicated rescue tug and for providing an additional “stand-by tug” capability. The stand-by tug fund allows the Department of Ecology to spot charter and pre-position tugs as a preventative measure, during periods of increased risk, when requested by the U.S. Coast Guard Captain of the Port. Ecology continued to pursue long-term, federal funding to make the dedicated tug a permanent spill prevention measure for the waters of Washington.

Spill Preparedness Activities

Vessel and Facility Drills and Exercises

Ecology engages facilities, vessels and spill response organizations in drills and exercises on a regular basis. These serve several important functions:

- ◆ Increase readiness in the event of an actual emergency
- ◆ Provide a means to assess the effectiveness of response plans and response capabilities
- ◆ Demonstrate the knowledge and skill of the plan implementers
- ◆ Serve as a training tool for response personnel
- ◆ Provide an opportunity to practice skills and improve individual performance in a non-threatening environment
- ◆ Require participants to network with each other and pre-plan decisions on resources
- ◆ Provide a means to educate and involve the public, media, and key community organizations in response planning
- ◆ Validate existing policies and procedures
- ◆ Identify planning conflicts
- ◆ Identify resource needs
- ◆ Clarify roles and responsibilities

Facilities are required to hold two deployment exercises and one tabletop (paper) exercise each year. During 2001, approximately 91 percent of the facilities met the deployment exercise requirement, and approximately 93 percent met the tabletop exercise requirement. Only one facility did not participate in a tabletop exercise in 2001.

Department of Ecology staff members participated in and evaluated 35 tabletop drills and 70 deployment drills in 2001. The Department initiated three unannounced deployment drills. The larger drills were:

- ◆ Puget Sound Refining Company, Equilon LLC, Anacortes – worst case tabletop and deployment exercise
- ◆ Olympic Pipe Line Company (BP Away Team) – worst case exercise
- ◆ Tesoro Northwest Refinery, Anacortes – worst case exercise
- ◆ McCord Pipe Line (US Oil) – worst case exercise

Most of the vessel contingency plan holders get credit for the deployment exercises completed by their primary response contractors in Washington state. Vessel plan holders are required to hold a tabletop exercise in the state every three years. In 2001, three com-

Preparedness Overview

Contingency Plans –

Oil-handling facilities, oil tankers and barges, and fishing, cargo and passenger vessels must have oil spill contingency plans approved by Ecology in order to operate in Washington. Contingency plans describe the immediate actions and notifications that must be done if oil is spilled. Facilities and the response organizations used by vessels run drills each year to train their personnel and test their ability to respond immediately and properly. Ecology evaluates the drills and uses the results to foster improvements in environmental and public health protection.

Geographic Response Plans (GRPs) – GRPs identify and rank strategies to protect specific natural resources for a particular area. This pre-planning takes the guesswork out of the initial response during the first 12 to 24 hours of a spill. Ecology staff work with other agencies to develop these plans.

Natural Resource Damage Assessments – When oil is spilled to state waters, the responsible party must pay the state for any natural resources damaged. Ecology staff work with other agencies and responsible parties to determine the damages, recover these costs,

Continued next page

and restore the resources.

Interagency Coordination – Ecology works with states and provinces along the West Coast to ensure a consistent approach to spill prevention and response.

Education and Outreach – Ecology staff educate, inform and advise interested parties about spill prevention and response.

panies held exercises in Washington. One of the larger drills was a worst-case exercise with Washington State Maritime Cooperative, s done in conjunction with K-Line Shipping. The Department will be tracking out-of-state vessel drills more aggressively in 2002.

Three companies needed to have a worst case drill in 2001, but were not fully prepared due to staffing changes and training issues. Department plan managers strongly encouraged these facilities to take the time to train their management teams so that the drills they do would have a positive outcome. McNeil Island Correctional Facility, Trans-Mountain Pipe Line and Rainier Petroleum prepared for their worst-case exercise with training from the Department of Ecology and contractors. They held smaller drills and are working towards the goal of having a successful worst-case exercise in 2002.

The Department of Ecology held an unannounced spill response equipment deployment drill with Polar Tankers, Inc. The drill tested notification, mobilization and response to a hypothetical collision of a fishing vessel and a crude oil tanker near the entrance to the Strait of Juan de Fuca. The unannounced exercise with Polar Tankers, Inc. illustrated the effectiveness of the Department's drill program. Through the exercise, the company and the agency learned that some critical equipment had been moved, additional training

was needed to address safety and operational issues, and some of the equipment depicted in the company's contingency plan was not appropriate for the operating environment. The Department of Ecology and Polar Tankers, Inc. worked together to solve the problems and protect the sensitive Washington state waters.

The drill program has revealed some common deficiencies. Most of the vessel and facility spill management team members only work within the Incident Command System during drills and spills. That means that in Washington most Spill Management Teams only practice their roles and responsibilities

once a year. Many of the plan holders have difficulty with the Incident Command System process and meetings depicted in their plans. The Department offers training on the process to any company requesting it.

The agency has also found that many plan holders assign roles on the spill management team based on the role of the person within the organization, rather than on the suitability of the individual. The Department has found that many of the roles within the Incident Command System require an aggressive personality and is advising



All drills start with a briefing session, covering the planned activities, safety, and roles and responsibilities.

plan holders to assign positions based on capabilities, not hierarchy within the organization.

Contingency Plan Rules Revision

During 2001, the Department of Ecology continued to solicit informal feedback on potential changes to the state's vessel and facility oil spill contingency plan rules. These rules also describe the agency's drill evaluation program and the approval process for Washington's primary response contractors. Opening the rule gives the agency an opportunity to build on the many lessons learned from past spills and drills. The amended oil spill rule should reflect the last 10 years of improvements to Washington's spill readiness, such as the development and use of the Geographic Response Plans. Also, two key portions of the spill preparedness program, planning standards or benchmarks and drill evaluation criteria, are published as guidance. This guidance needs to be moved into the rule in accordance with Washington Supreme Court decisions regarding state regulations. The rule amendment process should begin in earnest during the first quarter of 2002.

Geographic Response Plans

Geographic Response Plans (GRPs) identify sensitive public resources and prioritize protection strategies that can be implemented in the event of an oil spill to state waters. This takes the guesswork out of the initial response to a spill.

The response strategies for most of the marine GRPs were updated and posted to the Spills Program Web page in 2001. The Columbia and Snake River GRP updates are in progress, and should be completed by the end of 2002.

Spill Response Activities

Spills Reported

In 2001, the Department of Ecology received reports of 4,616 spill incidents, including 17 in adjoining states. The Department referred 4,607 spill incidents to the Spills Program for follow-up. (See *Table 2. Spill Referrals by Type for 2001*. and *Figure 6. Spill Reports by County for 2001*.) Spills Program staff took action on 4,061 incidents, making 2,357 field responses. Figure 6 illustrates where the reported spills occurred, by county and by Ecology region. (Note: Numbers may not reconcile because the dates of reports, referrals and responses may not occur in the same calendar year.)

Response Overview

24-Hour Statewide Response – Ecology provides 24-hour emergency response to oil and hazardous material spills that pose a risk to public health and safety and the environment. Responders also serve as Ecology's eyes and ears, following up on reports of pollution.

Compliance and Enforcement – Once an oil spill occurs, Ecology can take a wide range of enforcement and compliance actions including administrative orders, field citations, penalties, and cost recovery of all response costs incurred by the state.

Cleanup Oversight – As the state natural resource trustee during an oil spill, Ecology has oversight authority to ensure that the responsible party is acting properly to clean up the spill and fully protect the environment.

Table 2. Spill Referrals for 2001 by Type of Substance.

Spill Referrals* by Type for 2001	
Type of Substance	Number of Referrals
Petroleum Products Gasoline, diesel fuel, crude oil, hydraulic oil, lubrication oil	1,582
Meth Lab Waste Anhydrous ammonia, lithium, solvents	1,863
Hazardous Substances Pesticides, insecticides, batteries, paint, other toxics	315
Miscellaneous Substances Wastewater, sewage sludge, garbage, dairy waste, algae	847
*Reports of spills referred to the Spills Program for followup. Count is based on date of referral, not date of report.	

Spill Reports by County for 2001

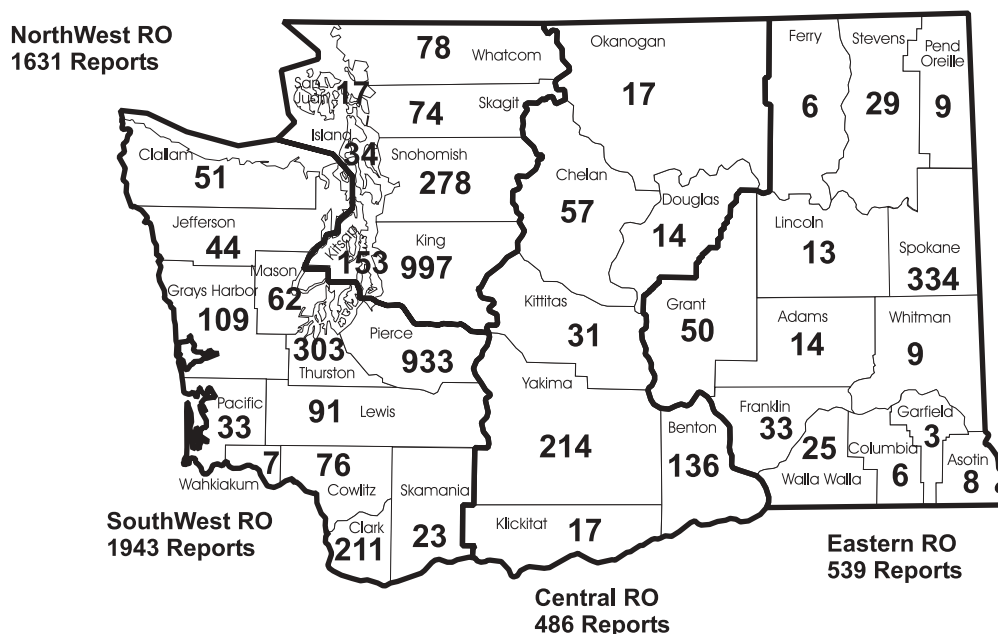


Figure 6. Spill Reports by County for 2001.

Confirmed Oil Spills to Water

Table 3. 25+ Gallon Oil Spills to Water for 2001.

25+ Gal. Oil Spills to Water ¹ , 2001		
	Number of Spills	Gallons Spilled
Covered Vessels ²	10	4,083
Uncovered Vessels	14	2,573
Other ³	13	9,394
Total	37	16,050
¹ Surface water only. ² Vessels covered under state laws and rules (all cargo and passenger vessels 300 gross tons or larger, and all oil tankers and tank barges). ³ Pipelines, tanks, tank trucks, etc.		

The rate of moderate oil spills (25 gallons or more) to surface water rose in the last two years. In 2001, there were 37 confirmed oil spills of 25 gallons or more, where the spill reached surface water. (See Table 3. 25+ Gallon Oil Spills to Water.) At least 16,050 gallons spilled in these incidents. In 2000, there were 33 spills, for a total volume spilled of 10,707 gallons. In 1999, if the anomalous major pipeline spill in Bellingham is excluded, there were 27 moderate spills, totaling 7,159 gallons of oil.

Drug Labs

The Department of Ecology received 1,890 reports of separate clandestine drug lab and lab dumpsites in 2001, and made field responses to 1,858 sites. In some cases, local law enforcement was able to make the field response. (See Table 4. Drug Labs.) The number of sites and field responses continues to grow. All counties reported finding sites in 2001; Pierce County alone reported 589 sites.

Meth labs often contain modified and unstable pressurized containers that must be vented under controlled conditions before they can be emptied and disposed. In 2001, Department staff handled 1,755 of these containers. There were 971 ammonia tanks, including 132 that were 150-pound cylinders, 758

hydrogen chloride generator tanks, and 26 other pressurized tanks.

Each meth lab represents \$750 in waste removal costs for the Department. Spills Program staff members have worked hard in 2001 developing a system to keep these costs as low as possible. Their efforts were recognized in 2001, when Governor Gary Locke presented the team with a Governor's Award for Service and Quality Improvement. The award noted that the team had significantly reduced the reliance on contractors to do the actual meth lab cleanup, created a way for law enforcement to safely store chemicals from small meth labs for the Department to pick up and dispose of in bulk, and creatively found a way to dispose of tanks. By training staff members to do much of the actual cleanup work themselves, the team saved an average of \$1,300 per lab or dumpsite.

The surge in the problem had stretched the Department of Ecology's response resources in the past few years. The Legislature responded to the agency's request for expanded assistance by funding 10 new positions. Eight of those positions were filled in 2001.

Resource Damage and Restoration

Those responsible for oil spills must compensate Washington citizens for damage to public natural resources, in addition to penalties and cleanup expenses. The Department of Ecology coordinates assessing oil spill damages and oversees efforts to restore injured natural resources in cooperation with other state agencies. The resource damage assessment process is triggered when an oil spill of 25 or more gallons reaches surface water.

During 2001, 37 spills occurred that triggered the Natural Resource Damage Assessment (NRDA) process. As of March 2002, the monetary assessment had been determined for 26 of those cases, for a total of \$81,641. Assessments may be collected during the year the spill occurs, or in later years. In 2001, \$89,315 was collected for restoration projects.



Governor Gary Locke presents his quality and service award to Ecology's spill responders and others for their work in cleaning up meth labs and dumps.

Table 4. Drug Labs.

Drug Labs				
	1998	1999	2000	2001
Sites¹ Reported	347	786	1454	1890
Field Responses²	335	747	1353	1858
<p>1 Sites includes labs where drugs were manufactured and places where wastes were dumped. 2 Includes only sites where Ecology responded; sites handled only by other agencies or where it was determined a field response was not necessary are not counted. Note: Numbers may not coincide with numbers in previous years' Annual Reports due to tracking system showing "reports" as "responses."</p>				

Coastal Protection Fund Resource Restoration Projects

Walla Walla National Wildlife Refuge Wetlands and Riparian Habitat Restoration and Enhancement, \$130,000. This project will expand riparian (waterside) corridor habitats and provide a flooding regime that will help establish riparian vegetation. The floodplain wetlands and riparian forest areas on the Walla Walla River are unique in the desert environment of the Mid-Columbia River Basin. Wintering waterfowl make heavy use of nearby existing wetlands. Restoring a more diverse wetland and riparian complex will substantially improve conditions for the native fish and wildlife that on these habitats.

Sacajawea State Park Improvements, \$110,000. The money will be used to improve recreational and educational opportunities in the Sacajawea State Park related to the upcoming Lewis and Clark Bicentennial commemoration. These funds will be used to build a trail system connecting visitors to the rivers and educational opportunities, for trailside exhibits, and to replace interpretive center exhibits.

Investigations and Enforcement

The Department of Ecology investigates major spills and incidents to determine:

- ◆ The cause(s) of the incident. This information helps Ecology educate and assist industry and others in prevention.
- ◆ Whether a penalty or other enforcement action is appropriate.
- ◆ The volume of the spill, if any. Spill volume is the basis for assessing damage to natural resources.

Department staff members work with federal agencies and industry as an interdisciplinary team in conducting investigations.

Spill Investigations

In 2001, Spills Program investigators examined 14 marine incidents. (Marine incidents refer to oil spills from vessels, collisions, near misses, losses of power or propulsion, and serious violations of marine safety rules.) Five of these investigations resulted in findings of facts used to support recommendations to prevent future spills, penalties for spills, and natural resource damage cost recovery.

In 2001, staff members conducted several facility spill investigations to identify causes of the spills and to work with facilities to establish and implement remedial measures to prevent similar incidents from recurring. They also established the penalty assessment for the Olympic Pipe Line spill in Bellingham using the submitted water quality information.

Enforcement

Washington laws and rules are intended to protect Washington waters from the harm caused by spills of oil and hazardous substances. When efforts to obtain compliance voluntarily fail, the

Department of Ecology resorts to enforcement actions authorized by statute. Enforcement may take the form a Notice of Violation, Administrative Order or Notice of Penalty.

A Notice of Violation notifies the recipient of violations or possible violations of state laws or rules, and requests a report describing how the recipient will comply. An Order requires the recipient to take some action to come into compliance (an Administrative Order), or it may request reimbursement for expenses incurred by the state in responding to a spill (a Cost Recovery Order). A Notice of Penalty imposes a monetary penalty on the recipient for law or rule violations, or failure to comply with a Spills Order. Spills Program field staff can also issue a citation form of penalty for minor spills and violations.

In 2001, the Spills Program issued 40 Notices of Violation, two Administrative Orders, five Cost Recovery Orders, and 48 penalties.

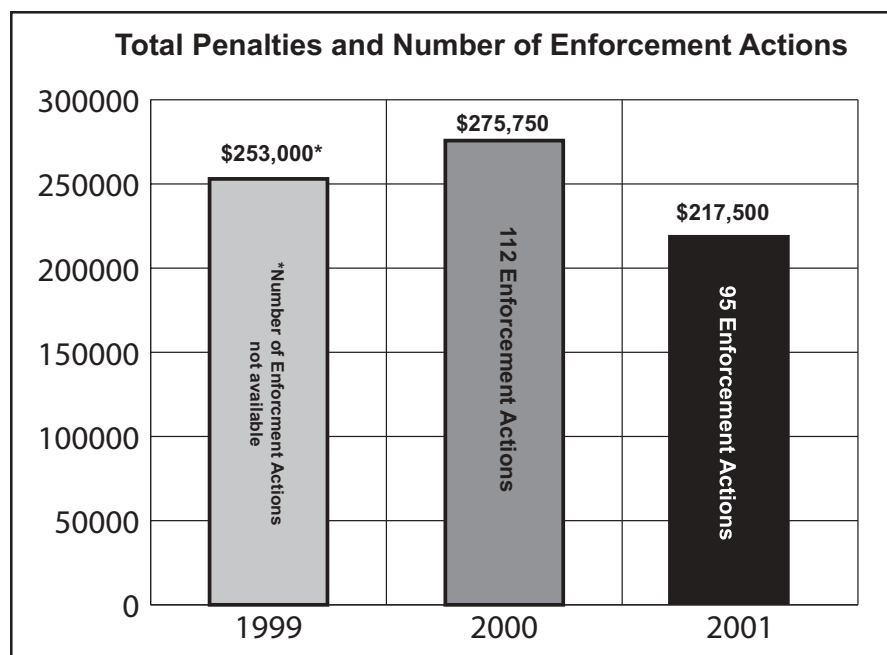


Figure 7. Total Penalties and Number of Enforcement Actions.

Penalties issued totaled \$217,500. (See Figure 7. Total Penalties and Number of Enforcement Actions.) For more information on individual penalties and amounts, see the Department of Ecology's Enforcement Web page at: <http://www.ecy.wa.gov/enforce.html>

Spill SCENE

Spill Scene is published by the Washington State Department of Ecology to provide information on oil and hazardous substance spill prevention, preparedness and response. We welcome your comments and questions. Call (360) 407-7211 or write: Editor, **Spill Scene**, Department of Ecology, Spills Program, P.O. Box 47701, Olympia, WA 98504-7701. Visit our website at www.ecy.wa.gov/programs/spills/spills.html

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